WHAT IS CLAIMED IS:

1. A run length limited code generation method, comprising:

generating a plurality of different code
sequences, which have recording densities that
gradually become higher, as a plurality of different
code sequences which are to be recorded on a plurality
of successive subfields on a test data field of an
information storage medium.

2. A method according to claim 1, further
comprising:

generating the plurality of different code
sequences on the basis of a plurality of different run
length limitations which gradually decrease a minimum
run length of identical codes.

3. A method according to claim 1, wherein the run
length limited code generation method is a method of
generating a (d, k) run length limited code sequence
which meets a condition that a minimum run length of
identical codes is (d+1), and a maximum run length of
identical codes is (k+1), and

the method further comprises:

under the condition d1 > d2 > ⋯ > dL,

generating a (d1, k1) run length limited code
sequence to be recorded on a first subfield of the
information storage medium;

generating a (d2, k2) run length limited code

sequence to be recorded on a second subfield of the
information storage medium; and

generating a (dL, kL) run length limited code
sequence to be recorded on an L-th subfield of the

5   information storage medium.

4.   A method according to claim 1, further
comprising:

under the condition $P1 \leq P2 \leq \cdots \leq PL$ and $P1 < PL$,

generating a run length limited code sequence that

10   includes a minimum run length pattern with a frequency
P1 of occurrence, a run length limited code sequence
that includes a minimum run length pattern with a
frequency P2 of occurrence, and a run length limited
code sequence that includes a minimum run length

15   pattern with a frequency PL of occurrence.

5.   A run length limited code recording/
reproduction apparatus for generating, recording,
and reproducing a run length limited code sequence,
comprising:

20   a generation unit for generating a plurality of
different code sequences which have recording densities
that gradually become higher; and

a recording unit for recording the plurality of
different code sequences generated by the generation

25   unit on a plurality of successive subfields in a test
data field of an information storage medium.

6.   An apparatus according to claim 5, wherein the

generation unit generates the plurality of different
code sequences on the basis of a plurality of different
run length limitations which gradually decrease
a minimum run length of identical codes.

5   7. An apparatus according to claim 5, wherein the
run length limited code generation apparatus is an
apparatus for generating, recording, and reproducing a
(d, k) run length limited code sequence which meets
a condition that a minimum run length of identical
10   codes is (d+1), and a maximum run length of identical
codes is (k+1),

       under the condition $d1 > d2 > \cdots > dL$,

       the generation unit generates a (d1, k1) run
length limited code sequence, (d2, k2) run length
15   limited code sequence, and (dL, kL) run length limited
code sequence, and

       the recording unit records the (d1, k1) run length
limited code sequence on a first subfield of the
information storage medium, the (d2, k2) run length
20   limited code sequence on a second subfield of the
information storage medium, and the (dL, kL) run length
limited code sequence on an L-th subfield of the
information storage medium.

       8. An apparatus according to claim 5, wherein
25   under the condition $P1 \leq P2 \leq \cdots \leq PL$ and $P1 < PL$,
       the generation unit generates a first run length
limited code sequence that includes a minimum run

length pattern with a frequency P1 of occurrence,
a second run length limited code sequence that includes
a minimum run length pattern with a frequency P2 of
occurrence, and a third run length limited code

5   sequence that includes a minimum run length pattern
with a frequency PL of occurrence, and

the recording unit records the first, second,
and third run length limited code sequences in turn on
a plurality of successive subfields in a test data

10   field of an information storage medium.

9.   An apparatus according to claim 5, further
comprising:

a reproduction unit for reproducing the plurality
of subfields in turn; and

15   an adjustment unit for adjusting reproduction
performance of the reproduction unit on the basis of
reproduction results of the plurality of subfields.

10.   A run length limited code recording/
reproduction method for generating, recording, and

20   reproducing a run length limited code sequence,
comprising:

generating a plurality of different code sequences
which have recording densities that gradually become
higher; and

25   recording the plurality of generated different
code sequences on a plurality of successive subfields
in a test data field of an information storage medium.

11. A method according to claim 10, further comprising:

generating the plurality of different code sequences on the basis of a plurality of different run length limitations which gradually decrease a minimum run length of identical codes.

12. A method according to claim 10, wherein the run length limited code generation method is a method for generating, recording, and reproducing a (d, k) run length limited code sequence which meets a condition that a minimum run length of identical codes is (d+1), and a maximum run length of identical codes is (k+1), and

the method further comprises:

under the condition $d1 > d2 > \cdots > dL$,

generating a (d1, k1) run length limited code sequence, (d2, k2) run length limited code sequence, and (dL, kL) run length limited code sequence; and

recording the (d1, k1) run length limited code sequence on a first subfield of the information storage medium, the (d2, k2) run length limited code sequence on a second subfield of the information storage medium, and the (dL, kL) run length limited code sequence on an L-th subfield of the information storage medium.

13. A method according to claim 10, further comprising:

under the condition $P1 \leq P2 \leq \cdots \leq PL$ and $P1 < PL$,

generating a run length limited code sequence that includes a minimum run length pattern with a frequency P1 of occurrence, a run length limited code sequence that includes a minimum run length pattern with a

5   frequency P2 of occurrence, and a run length limited code sequence that includes a minimum run length pattern with a frequency PL of occurrence; and

recording the first, second, and third run length limited code sequences in turn on a plurality

10   of successive subfields in a test data field of an information storage medium.

14. A method according to claim 10, further comprising:

reproducing the plurality of subfields; and

15   adjusting reproduction performance on the basis of reproduction results of the plurality of subfields.